

Application Serial Number 10/538,637
Response to Office Action
Dated February 29, 2008

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REMARKS / DISCUSSION OF ISSUES

Claims 1-8 are pending in the application. Claim 1 is the independent claim.

Rejections under 35 U.S.C. § 103(a)

Claims 1, 4, 5 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Oyama, et al.* and *Ruile, et al.*, which were previously applied. For at least the reasons set forth below, Applicants respectfully submit that this rejection is improper and should be withdrawn.

As stated in MPEP § 2143, in order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

In addition, Applicants rely at least on the following standard of law as it relates to obviousness. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. While the sequence of these questions might be reordered in any particular case, the factors continue to define the inquiry that controls. If a court, or patent examiner, conducts this analysis and concludes the claimed subject matter was obvious, the claim is invalid or unpatentable under § 103. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727; 82 U.S.P.Q.2D 1385 (2007), citing, in part *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966).

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However, the Court in *KSR* continued: "A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. See *Graham*, 383 U.S., at 36, 86 S. Ct. 684, 15 L. Ed. 2d 545 (warning against a "temptation to read into the prior art the teachings of the invention in issue" and instructing courts to "guard against slipping into the use of hindsight" (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 412 (CA6 1964)))." Moreover, if there is no suggestion to combine the teachings of the applied art, other than the use of Applicants' invention as a template for its own reconstruction, a rejection for obviousness is improper. *Ex parte Crawford, et al.* Appeal 20062429, May 30, 2007.

i. Claim 1

Claim 1 recites:

*A device having biomolecular binding sites for a biomolecule, comprising:
a resonance circuit, said resonance circuit comprising a resonance frequency (f)
determining sensor element or being electrically coupled to a resonance frequency
determining sensor element, a remote power transmission element, which receives
power and provides electrical power to the device, wherein binding at the biomolecular
binding sites affects a physical property of the resonance frequency determining sensor
element and thereby the resonance frequency, and a circuit, which is separate from the
remote power transmission element, for RF communication of an RF signal in
dependence of the resonance frequency of the resonance circuit.*

The Office Action concedes that *Oyama, et al.* fails to disclose a device comprising a remote power transmission element for receiving a resonant frequency. Firstly, Applicants rely on the metes and bounds of the specific language of claim 1, and do not necessarily concur with the interpretation of this language in the Office Action.

The Office Action then turns to *Ruile, et al.* in an attempt to cure the deficiencies of *Oyama, et al.* In particular, the Office Action directs Applicants to column 2, lines 30-

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50 for the disclosure of the remote power transmission element. Applicants respectfully submit that this portion of *Ruile, et al.* neither discloses nor suggests a device that provides electrical power to the device.

As noted in the Response under Rule 116, in an embodiment described in connection with Fig. 1 of the filed application, the device (illustratively a biosensor cartridge) 1 is provided with a photodiode 3 as a remote power transmission element. By shining light 2 on the photodiode the device is provided with power. In another embodiment described in connection with Fig. 10 of the filed application, a remote power transmission element comprises a coil 101 forming a part of an RF power receiving element which is arranged to receive power via an RF power signal at a frequency f1. This frequency differs from the RF frequency f2 of the oscillator. Clearly, the claims reflect the powering of the device by the receiving of power by the remote power transmission element and its providing of electrical power to the device. Moreover, the **remote power transmission element is a separate from the circuit for RF communication.**

By contrast, *Ruile, et al.* does not disclose at least the noted features of claim 1. Particularly, the reference does not disclose or suggest the powering of the device by the **remote power transmission element** and a separate, which receives power remotely (e.g., light on a photodiode) and provides electrical power the device; and a separate **circuit for RF communication**. To this end, although the reference discloses little about the radio frequency transmitter and receiver, there is no disclosure of its use as a remote power transmission element as claimed. To this end, the transmitter and receiver are described in the Summary of the Invention of *Ruile, et al.*:

“..a radio frequency transmitter and receiver having transmission and reception antennas and an electronic evaluation device,

the impedance element, which is to be exposed to the effect to be detected by the sensor part, being electrically connected to a surface-wave structure, and the transmitter serving for radio transmission of an interrogation pulse and the receiver, with its evaluation device, serving for radio reception and for qualitative/quantitative evaluation

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of the change, influenced by the effect, in the impulse response of the surface-wave arrangement." (Emphasis provided).

Moreover, assuming arguendo that the RF transmitter and receiver of the applied art did provide power to the device as claimed, the reference is void of a separate RF communication circuit. Therefore, the applied art fails to disclose at least one feature of claim 1. As such, and for at least the reasons set forth above, Applicants respectfully submit that the rejection of claim 1 and the claims that depend therefrom is improper. As such, Applicants submit that claim 1 and the claims that depend therefrom are patentable over the applied art.

a. Functional Language

The Examiner asserts that the featured 'remote power transmission element, which receives power and provides electrical power to the device' is not worthy of patentable weight, alleging this as a function and not a positive limitation. Applicants respectfully disagree. As recently as March of this year, the CAFC has again acknowledged the patentable merit of functional language. Notably, in *Microprocessor Enhancement Corp. v. Tex. Instruments*, 2007-1249, -1286, 2008 U.S. App. LEXIS 6837, (Fed. Cir. April 1, 2008) the CAFC held "The functional language is, of course, an additional limitation in the claim. (Emphasis provided.) See, e.g., *Wright Med. Tech., Inc. v. Osteonics Corp.*, 122 F.3d 1440, 1443-44, 43 U.S.P.Q.2D (BNA) 1837, 1840 (Fed. Cir. 1997) (functional language analyzed as a claim limitation)."

Thus, the Examiner has erred in denying Applicants their right to full consideration of the functional language in the claims.

b. Non-Analogous Art

In addition to the foregoing, Applicant submits that the reference to *Ruile, et al.* is not pertinent art and thus cannot serve to establish a rejection under 35 U.S.C. § 103(a). The determination that a reference is from a non-analogous art is two-fold. First, the reference must be within the field of the inventor's endeavor. If it is not, the reference

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must be reasonably pertinent to the particular problem with which the inventor was involved. *In re Dillon* 16 USPQ2d 1897 (CAFC 1990). *Ruile, et al.* relates to a radio-interrogated SAW sensor. The sensors of the reference are applied to toll systems on highways and in road tunnels to measure road loading. (See, for example column 1, line 51-column 2, line 16 of the reference.) By contrast, the claims under examination relate to a device having biomolecular binding sites for a biomolecule. These devices are used, for instance, in detection of biomolecules in genetic testing, the presence of lipids, proteins, and the like. These technologies are greatly disparate, and it is not reasonable to assert that one skilled in biosensors would consider road sensors to be within his/her field of endeavour.

As such, Applicants respectfully submit that the applied art is non-analogous art and thus cannot serve to establish a rejection under 35 U.S.C. § 103(a).

Conclusion

In view the foregoing, applicant(s) respectfully request(s) that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies to charge payment or credit any overpayment to Deposit Account Number 50-0238 for any additional fees, including, but not limited to, the fees under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17.

If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

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